

This **CUSTOMER IDENTIFICATION CARD** constitutes an integral part of the Customer Agreement No:.....

| | |
|--|---|
| Name and Surname | |
| Date of Birth (DD/MM/YYYY) | |
| Gender | <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE |
| Registered Address | Street, Postal Code, Town, Country: |
| Mailing Address | Street, Postal Code, Town, Country: |
| Identity Document Type and Number | |
| Tax Identification Number | |
| Currency of the Account | <input type="checkbox"/> USD <input type="checkbox"/> EUR <input type="checkbox"/> PLN |
| Customer Bank Account Minimal sum of payment for foreign currencies is 1000 (USD, EUR, PLN) | Bank Name: Bank Address: BIC / SWIFT Code: IBAN or Account Number: Further instructions: |
| Telephone Number | |
| E-mail Address | |
| Please invent a security question | |
| Answer to the above question | |
| Introducing Partner Information | |

Client has the right to change the data in the Client's Identification Card. In case of such changes Client is obliged to immediately inform X-Trade Brokers about changes in writing on the Client's Data Change Form. Change is effective on the next working day after the day of receiving by X-Trade Brokers information in accordance with 3.6 of the Rules and Regulations. In case when factual change of data and information included in Client's Identification Card will occur and Client won't inform X-Trade Brokers about it in a manner specified above X-Trade Brokers is not liable for any losses suffered as a result of acting on the basis of information provided by Client in a previous Client's Identification Card.

Filled out by the Customer

I hereby declare that the above information is consistent with its actual condition and legal status and I undertake to update this data forthwith in writing after any changes have occurred. By filling out this form I agree to processing of my personal data by X-Trade Brokers DM S.A. for any purposes related to performance of the Framework Contract, for advertising purposes and I agree to receive, in electronic form, any information related to the offer of X-Trade Brokers DM S.A. in accordance with the act of 18th July 2002 on protection of personal data (Journal of Laws of 2002 No 144, item 1204 as amended).

Date..... **Name and Surname**..... **Client's Signature 1**.....

Filled out by X-Trade Brokers

I hereby certify that this Customer Identification Card has been correctly filled in and that the personal data contained herein are consistent with the data in the Identity Document, whose photocopy has been attached with this Customer Identification Card.

Date..... **Name and Surname**..... **Signature**.....

**MIFID CLIENT'S AWARENESS QUESTIONNAIRE
RULES TO PERFORM INDIVIDUAL CLIENT'S EVALUATION**

1. X-Trade Brokers Dom Maklerski Spółka Akcyjna („the Brokerage House”) prior to concluding the Agreement for providing brokerage services performs an evaluation of a certain service whether it is appropriate concerning the individual situation of a Client.
2. The evaluation is performed prior to concluding the Agreement for the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski Spółka Akcyjna
3. Prior to signing the Agreement, Brokerage House. shall ask the Client to fill in the Client's Questionnaire Form ("Form").
4. The evaluation is performed in relation to new Clients and existing Clients of the Brokerage House, who would like to broaden the scope of provided services.
5. Appropriateness of a certain investment service chosen by the Client is depending on the fact whether the Client has sufficient knowledge and experience to accurately evaluate the risks in connection with the kind of financial instruments and investment services. The appropriateness of the service is determined by an authorized employee of the Brokerage House., who is entitled to countersign the Agreement on behalf of the Brokerage House., by using the evaluation algorithm based on information in this Form as provided by the Client.
6. If, in accordance with the evaluation algorithm, the financial instrument or investment service is not appropriate for the Client, the Brokerage House informs the Client about thereof in writing or by electronic means of communication. The Client is required to confirm the receipt of this information by placing a signature in the proper column or by electronic means of communication.
7. If the Client refuses to provide information included in the Form, the Brokerage House will inform the Client that an evaluation is not possible. In such case, the Brokerage House conducts no evaluation as to such appropriateness.
8. Negative evaluation of the appropriateness of the investment service and refusal to provide information are not an obstacle in concluding the Agreement with the Client. The Brokerage House may however refuse to conclude an Agreement with a Client if on the basis of performed evaluation, decides that the service is completely inappropriate for the Client.
9. When the Agreement is concluded with more than a one natural person, the Brokerage House performs a valuation regarding the appropriateness of the financial investment or investment service for all co-owners. Co-owners for whom, in accordance with the performed valuation, the financial instrument or investment service is inappropriate should be informed about inappropriateness of the financial instrument or investment service in accordance with clause 6.
10. In case of Clients other than natural persons it is considered that the financial instrument or investment service is appropriate if the persons authorized to represent the Client will provide a written statement that the Client employs persons having appropriate knowledge and experience concerning investing in financial instruments.
11. In case the Client does not provide the statement specified in clause 10, then the Brokerage House informs the Client that the service is not appropriate for this Client because of too much risk involved. The Client is then required to confirm receipt of such information.
12. Appropriateness valuation of the financial instrument or investment service always concerns the person or entity, which concludes the Agreement. In case when the Agreement is concluded through an authorized representative, the Brokerage House is obliged to request the Client to submit information necessary to perform Client's individual situation valuation.
13. If, at any time, the information contained in this Form are not accurate or complete, the Brokerage House shall request the Client to supplement the information. In the above-mentioned case, the Brokerage House shall request the Client to fill in a new Form.

This **CLIENT'S QUESTIONNAIRE FORM** constitutes an integral part of the Customer Agreement No:.....

X-Trade Brokers Dom Maklerski S.A. shall request the Client to submit information necessary to perform an evaluation of his investment knowledge and experience and investment aims. Given answers or its lack will be considered in such evaluation. Information submitted by the Client will be used only for business purposes. The Client is not obliged to give answers to all submitted questions.

| Name Surname | Identity Document No. |
|---|-----------------------|
| <p>For each question below please mark one answer only, the one that best describes your experience.</p> | |
| <p>1. How do You evaluate Your knowledge in respect of investing in financial instruments?</p> | |
| <p>[a] I have a thorough and broad knowledge of investing in all available financial instruments</p> | |
| <p>[b] I know the basic rules of investing in financial instruments</p> | |
| <p>[c] I don't have any knowledge of investing in financial instruments</p> | |
| <p>2. Do You have personal experience in relation to investing in financial instruments?</p> | |
| <p>[a] I have a significant experience in investing in financial instruments</p> | |
| <p>[b] I have basic experience in investing in financial instruments</p> | |
| <p>[c] I have no experience in investing in financial instruments</p> | |
| <p>3. What types of service, transactions and financial instruments are You familiar with?</p> | |
| <p>[a] I do not know any financial instruments</p> | |
| <p>[b] Investment funds</p> | |
| <p>[c] Stocks</p> | |
| <p>[d] Futures contracts, options, CFD</p> | |
| <p>[e] Stocks, options, futures contracts, CFD</p> | |
| <p>4. What types of service, transactions and financial instruments are You familiar with?</p> | |
| <p>[a] Investment services without advisory services</p> | |
| <p>[b] Investment advisory services/ Portfolio management</p> | |
| <p>[c] None</p> | |
| <p>5. How long have you been investing on OTC market?</p> | |
| <p>[a] never</p> | |
| <p>[b] up to 1 year</p> | |
| <p>[c] 1 – 5 years</p> | |
| <p>[d] above 5 years</p> | |
| <p>6. How many transactions have You concluded during the last year on OTC markets?</p> | |
| <p>[a] none</p> | |
| <p>[b] up to 15</p> | |
| <p>[c] above 15</p> | |
| <p>7. How much of Your own assets have you invested during the last year on the OTC market?</p> | |
| <p>[a] 0 €</p> | |
| <p>[b] up to 2.000 €</p> | |
| <p>[c] 2.000 - 7. 000 €</p> | |
| <p>[d] above 7. 000€</p> | |
| <p>8. How long have you been investing on Stock Exchange markets?</p> | |
| <p>[a] never</p> | |
| <p>[b] up to 1 year</p> | |
| <p>[c] 1 – 5 years</p> | |
| <p>[d] above 5 years</p> | |
| <p>9. How many transactions have You concluded during the last year on Stock Exchange markets?</p> | |
| <p>[a] none</p> | |
| <p>[b] up to 15</p> | |
| <p>[c] above 15</p> | |

10. How much of Your own assets have you invested during the last year on Stock Exchange markets?

- [a] 0 €
- [b] up to 2.000 €
- [c] 2.000 - 7. 000 €
- [d] above 7. 000 €

11. What is the primary purpose of Your investment?

- [a] I aim at a safe accumulation of my savings
- [b] I aim at a profitability exceeding bank accounts rates, and I accept the risk of a decrease of my asset's value
- [c] I aim at maximizing profits and I accept a significant risk of losing a substantial amount of invested assets

12. How would You describe Your own level of risk acceptance?

- [a] I accept the risk and the possibility of suffering substantial losses
- [b] I accept the risk of investment value decrease
- [c] I do not accept investment risk nor the possibility of suffering losses

13. What share of Your financial surplus will be invested in financial instruments through the Brokerage House?

- [a] up to 30%
- [b] 30%-70%
- [c] above 70%

14. Your education

- [a] none
- [b] basic
- [c] high school diploma
- [d] higher education

15. Your profession

- [a] Management
- [b] Expert in banking & finance
- [c] Expert in other sector than banking & finance
- [d] Craftsman
- [e] Civil Servant
- [f] Labourer
- [g] Pensioner
- [h] Other profession
- [i] Unemployed

16. Which financial instruments are characterized by the use of financial leverage?

- [a] I don't know
- [b] stocks, bonds
- [c] futures contracts, options, CFD

I declare that the Brokerage House informed me that as a result of my refusal to provide answers for the above given questions, the Brokerage House is not able to perform the relevant evaluation. I declare that I have received the information concerning the Brokerage House and services, which shall be provided on the grounds of the concluded Agreement. I have been acquainted with financial risk related to the services mentioned above.

.....
Date, Client's signature

I confirm the reliability of the above personal information. I declare that I have received the information concerning the Brokerage House and services, which shall be provided on the grounds of the concluded Agreement. I have been acquainted with financial risk related to the services mentioned above.

.....
Date, **Client's signature 2**

Valuation of the chosen range of service

On the basis of the personal information provided above (or in case of lack some of the answers for the above questions) relating to certain kind of financial instruments and investment services and in accordance with the appropriate provisions of the law, the Brokerage House hereby states that the financial instrument or scope of investment services chosen by the Client is not appropriate for the Client involving to much investment risks in relation to the declared: knowledge, experience, investment purposes and individual situation, of which the Client is informed herewith.

.....
Date, signature, employee name seal DM

.....
Date, Client's signature

Agreement for the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski Spółka Akcyjna concluded in Warsaw,

between

| | | | |
|---|---------------|---------------------|----------|
| First Name | | | |
| Surname | | | |
| Registered residence address | | | |
| Type of ID document | | | |
| Series and number of ID document | | | |
| Type of Account (filled by XTB) | Standard | X-VIP | Prestige |
| Client classification (filled by XTB) | Retail Client | Professional Client | |
| Introducing Partner Information (filled by XTB) | | | |

Hereinafter referred to as the "Client",
and

X-Trade Brokers Dom Maklerski Spółka Akcyjna, with its registered office in Warsaw at Ogrodowa 58, 00-876 Warsaw (hereinafter referred to as "**X-Trade Brokers**"), entered into register of entrepreneurs conducted by the District Court for the Capital City of Warsaw, XII Commercial Division, in the National Court Register under KRS number 0000217580 with fully paid up share capital amounted to 5,520,625 PLN (say: five millions and five hundred twenty and six hundred twenty five polish zloty) hereinafter referred to as "**X-Trade Brokers**". X-Trade Brokers is a Brokerage House within the meaning of the Act on Trading in Financial Instruments of 29th July 2005 and is supervised by the Polish Financial Supervision Authority. X-Trade Brokers is also a participant of compensation scheme incorporated and maintained by the National Depository for Securities which is intended to ensure payments of cash to investors up to level determined by the Act. At signing this Agreement, X-Trade Brokers is represented by Management Board.

1. This Agreement lays down the general terms and conditions under which X-Trade Brokers undertakes to provide brokerage services consisting in the execution of orders to buy or sell property rights as regards financial instruments trading within the meaning of the Act on Trading in Financial Instruments (Journal of Laws of 2005, No 183, item. 1538, as amended – **the Act**) and keeping accounts and registers related to such trading with the use of Electronic Order Placement System (**EOPS**) and the Option Order Placement System (**OOPS**).
2. Any words and expressions in this Agreement beginning with the capital letter are defined in the Regulations referred to in clause 4 b.
3. By signing this Agreement, X-Trade Brokers undertakes to provide the following services:
 - a. execution of orders to buy or sell Financial Instruments, for the account of the Client;
 - b. dealing on the Financial Instruments for own account or reception and transmission of orders regarding the Instruments aforementioned;
 - c. opening and keeping for the benefit of the Client, accounts on which Financial Instrument are registered;
 - d. opening and keeping a Cash Accounts for the benefit of the Client, to be used to service the accounts on which the Financial Instruments are registered;
 - e. opening and maintaining Operational Register and Register of Financial Instruments;
 - f. keeping records of amendments on the accounts and registers above-mentioned and to settlement Transactions which the subject are Financial Instruments.
4. X-Trade Brokers provides services referred to in clause 3 above under the terms and conditions set forth by the following documents:
 - a. Herein Agreement (**Agreement**);
 - b. Regulations on the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski Spółka Akcyjna (**Regulations**);
 - c. Orders Execution Policy (OTC);
 - d. Client's ID Card;
 - e. Financial Instruments Specification Table;
 - f. Margin Table;
 - g. Table of Commissions and Fees;
 - h. Swaps Point Table;
 - i. Orders of the Member of the Management Board of X-Trade Brokers;
 - j. other additional documents which are furnished to the Client, while concluding the Agreement;
 - k. Declaration of Investment Risk.

5. The Client represents that, he acquainted with the Regulations, which form an integral part of this Agreement, and that he fully understood their provisions, accepting all obligations imposed on the Client by the herein Regulations related to the Transactions undertaken.
6. The provisions of documents referred to in clause 4 above, shall fully govern legal relationships between the Client and X-Trade Brokers within the scope of services provided by X-Trade Brokers.
7. To enter into this Agreement, the Client shall fill and sign, the following documents, which form an integral part of this Agreement:
 - a. Client's ID Card;
 - b. MiFID's Client's Questionnaire;
 - c. Orders Execution Policy (OTC);
 - d. Declaration of Investment Risk.
8. For the purposes of settlement with the Client, X-Trade Brokers shall keep a Settlement Account whose number shall be indicated in the order issued by the Member of the Management Board of X-Trade Brokers, into which Account the Client shall make payments of monetary resources for executing Financial Instruments Transactions.
9. The first payment made into the Settlement Account shall not be lower than the Minimum Initial Payment as determined by the order of the Member of the Management Board of X-Trade Brokers.
10. Monetary resources paid by the Client into the Settlement Account shall credit the Clients Cash Account in EOPS after their conversion into the Base Currency. The conversion shall be made at the Average X-Trade Exchange Rate on the Base Currency into the currency of the payment at the moment of booking the resources in the Transaction Platform.
11. Except as specified in the clause 24.1 of the Regulations, the Client shall have the right to withdraw the monetary resources accumulated on the Client's Account at any moment. In order to exercise this right the Client shall place, in writing or by telephone, an order of transfer resources from the Cash Account into the account indicated by the Client on the Client's ID Card. Placing the transfer order by phone shall be made in accordance with the provisions of Chapter 10 of the Regulations.
12. Withdrawal of the resources results at the same time in reduction of the balance of the Client's Cash Account and of the Current Balance of Operational Register maintained as a part of the EOPS, by the amount in Base Currency equal to the amount withdrawn after conversion into Base Currency at the average X-Trade rate from the moment of withdrawal.
13. In the event that the Client fails to pay by the due date any liabilities arising from clearing of a Transaction, the Client agrees that X-Trade Brokers deduct the monetary resources available on the Cash Account or deposited as Initial Margin in the amount necessary to settlement the Transaction, together with all due charges, fees or interests.
14. In order to enable the Client to conclude Transactions, X-Trade Brokers shall, free of charge, grant to the Client access to EOPS or OOPS, whose client application are available on the X-Trade Brokers web site.
15. The Client shall have the right to make any alterations to the data on the Client's ID Card by notifying X-Trade Brokers of the alteration in writing. The alterations shall be effective from the business day following the day of the receipt of such notification, made in accordance with clause 3.15 of the Regulations.
16. Any complaints regarding the functioning of X-Trade Brokers shall be made in accordance with the provisions of Chapter 26 of the Regulations.
17. The Client represents that he is aware of the fact that in some cases X-Trade Brokers may be the second party to the Financial Instruments Transactions, which may led to a conflict of interests. X-Trade Brokers represents that shall use best efforts to ensure that the potential conflict of interests has no impact on the X-Trade Broker's impartiality when concluding Transactions.
18. The Client shall have the right to terminate the Agreement with an immediate effect after having notified X-Trade Brokers of such termination by means of a registered letter with return receipt, subject to clause 28.7 of the Regulations.
19. X-Trade reserves the right to terminate the Agreement:
 - a. caused by important reasons, with a 1 month notice period;
 - b. with immediate effect without notice, having notified the Client in writing, should the Client breach any provisions of the Agreement or the Regulations.
20. Termination of the Agreement shall have no effect on any rights acquired before.
21. At any time after termination of the Agreement, X-Trade Brokers shall have the right to close and clear Transactions conclude by the Client without prior notice to the Client.
22. The parties hetero undertake to keep the subject of the Agreement confidential, unless disclosure of such information is necessary the proper performance of the Agreement's provisions or is required by law.
23. By signing the Agreement the Client represents that:
 - a. he has full legal capacity for acts in law and is under no legal limitation with regard to opening an investment account with X-Trade Brokers and executing Financial Instruments Transactions;
 - b. all information contained in the Client's ID Card and other documents are consistent with its actual condition and legal status.
24. Any amendments to this Agreement shall be made in writing and accepted by each party or shall be null and void.
25. The term of this Agreement shall continue until terminated.
26. The Agreement has been drawn up in two counterparts, with one copy for each party.
27. The Agreement shall commence on the day of its signing.

1. Definitions

OTC Financial Instruments are financial instruments within the meaning of „the Regulations on the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski S.A.“

Agreement for the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski S.A.

Spread is the difference between the bid and ask price of a particular Financial Instrument.

Tables of Commission and Fees is a Table of Commission and Fees within the meaning of „the Regulations on the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski S.A.“

2. General provisions

- 2.1. The subject of this Declaration (hereinafter referred to as **“Declaration”**) is to inform the Client about financial risk related to dealing in OTC Financial Instruments.
- 2.2. The Declaration describes some, but not all, types of risk related to dealing in OTC Financial Instruments.

3. Risk elements in relation to OTC Financial Instruments

- 3.1. Dealing in OTC Financial Instruments which valuation is based on securities, futures, currency exchange rates, price of raw materials, commodities, stock exchange indices or prices of other underlying instruments involves specific market risk for the quoted Underlying Instrument.
- 3.2. Specific risk market for a given underlying instrument includes, in particular the risk of political changes, changes in economic policy, as well as other factors which may considerably and permanently influence on the conditions and rules of exchange and valuation of a given Underlying Instrument.
- 3.3. In case of the occurrence of high or limited volatility of the Underlying Instrument market, X-Trade Brokers may without prior notice of the Client enlarge the Spread on OTC Financial Instruments.
- 3.4. For Equity CFD and for Floating Spread Account (CFD) chosen by the Client point 3.3 above shall not apply and Spread is variable and reflects the market price of an Underlying Instrument. Such a variable Spread is a part of market risk and may negatively influence overall costs associated with CFD and Equity CFD trading.
- 3.5. Particularly the period when the liquidity is largely limited on Underlying Instruments is opening of the market on Sunday at 11:00 p.m. X-Trade Brokers commences trading in such situation with an enlarged level of spread. Spread comes back to fixed values as fast as the liquidity and the volatility of the underlying market allows. Usually this process takes not more than 10-20 minutes, however in cases of limited liquidity or large volatility the process may take longer. The circumstances described in this point shall not apply to Equity CFD trading.

4. Financial leverage risk in relation to OTC Financial Instruments

- 4.1. OTC Financial Instruments are contracts which largely employ financial leverage mechanism. Nominal value of a Transaction may largely exceed the value of the deposit, which means that even subtle changes of the price of an Underlying Instrument may considerably influence on Client's account balance.
- 4.2. The Margin deposit paid may secure only part of the nominal amount of the Transaction, which determines high potential profit, but also the risk of heavy losses for the Client. The losses might in

certain particularly unfavorable circumstances exceed financial resources gathered on the Client's account.

5. The risk of occurrence of the Force Majeure

- 5.1 The Client accepts that in the situations, in which normal activity of X-Trade Brokers will be disrupted by the events of the Force Majeure, the execution of the Client's Order might be impossible to conduct or the Order may be executed on conditions less favorable than it results from the Regulations or the herein Declaration.

6. Confirmation of the execution of the placed disposal

- 6.1 In standard market conditions, X-Trade Brokers within 90 seconds confirms the disposal placed by the Client (Orders in case of Financial Instruments quoted in the „Instant execution“ mode or the price inquiry) concerning a given OTC Financial Instrument. This condition, however, shall not apply in situation when, on a given market, there is an exceptional variability of prices of the Underlying Instrument or the loss of liquidity and in other cases qualified in accordance with point 5.1 as Force Majeure.
- 6.2 In the period when market is opening, as mentioned also in point 3.5 the provisions of point 6.1 do not apply.
- 6.3 For most of Equity CFD's confirmation of Transaction execution or Order acceptance is only available after a relevant Underlying Instrument order was executed or placed on an Underlying Exchange. As soon as X-Trade Brokers receives an electronic confirmation of such transaction, it becomes a basis for Equity CFD Price and as such is visible in EOPS.

7. Error risk in the price of a Financial Instrument

- 7.1 The Client acknowledges that the quotations published by X-Trade Brokers via EOPS or OOPS may contain errors. The aforesaid errors cause, that the price of the X-Trade Brokers' Financial Instrument, deviates from the Underlying Instrument price, on which it is based, in such a manner that it does not reflect the Market Price of the Underlying Instrument, and due to this fact it shall be recognised as erroneous. The Client as an investor prior to conclusion of the Transaction shall acquaint himself with the approximate current Market Price of the Underlying Instrument. Risk of error in the price of Financial Instrument and the rights and obligations of the parties to the Agreement are described in Chapter 8 of the Regulations. Client should specifically acquaint himself with those conditions before trading in X-Trade Brokers.

8. Equity CFD

- 8.1 Equity CFD's Transaction entered by the Client in most cases generates a transaction on the Underlying Instrument on one or more of the Underlying Exchanges. Equity CFD quotation shown in EOPS should be deemed as indicative and in some cases may not guarantee that the Client will deal at this quotation. The actual Equity CFD Price of the Transaction on an Equity CFD will be based on the transaction price of an Underlying Instrument reported back by X-Trade Brokers. The Equity CFD Price of a concluded Transaction will be visible in the Operational Register.
- 8.2 In case of some Equity CFD's when a Client enters a short position X-Trade Brokers will offset this position with a short sale of an Underlying Instrument. Such transaction may result in additional borrowing cost for hard to borrow Underlying Instruments. In such cases these cost may heavily influence the Swap Point charged for a short position in Equity CFD's. For detailed description of Swap Points charges please refer to the Swap Points Table.
- 8.3 Under some circumstances an Underlying Exchange may cancel transactions on Underlying Instruments. In that case X-Trade Brokers has the right to cancel relevant Equity CFD Transactions with the Clients.
- 8.4 If an Underlying Instrument for an Equity CFD is being delisted on an Underlying Exchange and at the time of delisting there are still

open positions in relevant Equity CFD's, X-Trade Brokers has the right to close such positions without prior notification of the Client.

- 8.5** Client should specifically acquaint himself with conditions of trading Equity CFD described in the Regulations before trading in X-Trade Brokers.

9. Orders with the price limit, stop orders

- 9.1.** The Client has the possibility to place Orders with the price limit and stop Orders. Execution of the Orders with the price limit and the stop Orders shall be held in the following manner:

- The limit and stop Orders are realized at the price indicated by the Client with the exception from point b.;
- The stop and limit Orders realized upon the opening of the market are executed at the opening price for a given Financial Instrument;
- The Orders of the limit and stop type can be placed only then when a given Financial Instrument is traded;
- The Orders of the limit and stop type cannot be placed if the absolute value of the difference between the price of the Order's activation and the current price of the Financial Instrument is lower than the minimum limit for the stop Orders for a given Financial Instrument. These limits are available on the X-Trade Brokers website www.xtb.pl. The limits can be raised in case of the economic data publication (defined in the section Calendar available on the X-Trade Brokers website www.xtb.pl); or in case of the a high market volatility on a given Financial Instrument.
- Limits for stop and limit Orders are enlarged in the moment of opening a market on Sunday at 23 pm. Limits come back to fixed values as fast as the liquidity and volatility on the underlying markets allows. Usually the process takes from 10 to 20 minutes, however in cases of limited liquidity and enlarged volatility this period may last longer.

- 9.2.** Due to its specifics Equity CFD Orders may differ in some aspects from other Orders for other Financial Instruments. Prior to entering into any Equity CFD transaction the Client should become aware of how different Order types may influence Equity CFD transaction price. Most important differences are highlighted below:

- Limit Orders are realized at the price indicated by the Client or better;
- In the money Limit Orders are not allowed. For Buy Orders highest possible limit is the current Ask price. For Sell Orders lowest possible limit is the current Bid price;
- Stop Orders are realized at the conditions laid down by Underlying Exchanges.
- Market Orders are not subject to requote, which means that by using "Sell at Market" or "Buy at Market" the Client wishes to sell or buy Equity CFD at the price reflecting current market price of the Underlying Instrument;
- If a Client wishes to execute a market Order for Equity CFD's and relevant Underlying Instrument is currently suspended for trading (frozen) on the Underlying Exchange, then if the market Order for Underlying Instrument is not executed within 30 seconds, Client's market Order for Equity CFDs is rejected by EOPS.

10. Margin Call mechanism

- 10.1.** Margin Call mechanism in normal market conditions hedges account balance against falling below the value of the funds deposited on the account.
- 10.2.** Margin Call mechanism automatically closes the most unprofitable position of the Client when the Current Balance of the Operational Register (Equity) is equal or lower than 30% of the value of the Margin deposit paid to secure open positions.
- 10.3.** Should unfavorable market conditions arise, in particular if a price gap occurs, the execution price for Orders closed by the margin call mechanism of the Transaction may be so unfavorable that the losses suffered may exceed the balance on the Client's account.

11. Terms and conditions for keeping an Account

- 11.1.** Prior to signing the Agreement the Client should acquaint himself and accept all costs and charges related to the execution of the Agreement. It concerns in particular all costs of keeping and maintaining the account, all costs and commissions related to the Transactions Conclusion, Swap Point Rates and all other fees and commissions subject to the provisions of the Regulations and the Agreement.

12. Technological limitations

- 12.1.** Signing a binding Agreement shall mean that the Client knows and accepts specific technological features of the Transaction System provided by X-Trade Brokers (EOPS, OOPS). It concerns in particular the manner of EOPS, OOPS functioning, the manner of Orders execution, any limitations in the access to the account through electronic means that arise due to possible malfunctioning of services provided by third party who supply infrastructure necessary for access to applications, as well as other possible threats. The Client shall bear all consequences and costs arising from lack of access to the account and from any limitations in opportunities to execute a Transaction through electronic means and by telephone, for which X-Trade Brokers bears no responsibility.
- 12.2.** The exchange platform (EOPS, OOPS) may be temporarily suspended. This may prevent transactions from being concluded, for what X-Trade Brokers bears no responsibility. Such situation may specifically take place after closing by the Client a price dialogue question window (in a manner other than cancel order) before receiving than answer from a Server; or after generating to large number of questions for price, without concluding a transaction.

13. Final representations

- 13.1.** When deciding to sign the Agreement, the Client shall carefully consider whether such Transactions are appropriate for the Client, taking into account Client's investment knowledge and experience, financial resources, access to necessary technologies and other important factors.
- 13.2.** By signing this document the Client declares that the Client is aware of investment risk and financial consequences that are related to dealing Transactions in OTC Financial Instruments, also those which price may depend on price of securities, futures, exchange rates, prices of raw materials, commodities, stock exchange indices or other prices of underlying instruments not mentioned herein.
- 13.3.** The Client declares that the Client is fully aware that due to a high financial leverage, dealing in OTC Financial Instruments is strictly connected with the possibility of suffering heavy financial losses by the Client, even at a slight change of the Underlying Instrument price on which quoting prices of a given Financial Instruments are based.
- 13.4.** The Client declares that the Client is fully aware of the fact that it is not possible to make a profit on OTC Financial Instruments Transactions without taking the risk of losses.
- 13.5.** The Client declares that the Client's financial standing is stable and sufficient to enable him to invest on the above mentioned Financial Instruments.
- 13.6.** Any guarantees as to making a profit should be deemed false. The Client may under no circumstances accuse X-Trade Brokers for having asserted that there existed no investment risk or of giving any guarantees of profit.
- 13.7.** The Client exempts X-Trade Brokers from liability for any losses incurred by the Client as a result of OTC Financial Instruments Transaction made. Beyond all doubt, concluding a Transaction shall be deemed an independent decision of the Client. The Client may under no circumstances claim that the Client made any Transaction on the basis of any suggestions or recommendations made by X-Trade Brokers or its employees.

This **ORDER EXECUTION POLICY** constitutes an integral part of the Agreement No:.....

1. General provisions

1. Orders Execution Policy of Retail Clients regarding Contracts for Differences (CFD) and Option Financial Instruments is presented to Clients in accordance with MIFID Directives 2004/39/EC and 2006/73/EC.
2. According to the applicable law, when executing Client's Orders, X-Trade Brokers is required to act honestly, fairly and professionally in accordance with the best interest of its Clients. X-Trade Brokers has therefore adopted Order Execution Policy OTC (hereinafter the "Policy"), which determines the detailed description of executing Orders in order to achieve the best possible results for the Clients.
3. The following Policy is an integral part and should be read and understood in conjunction with the "Regulations concerning the provision of services consisting in the execution of orders to buy or sell property rights, keeping property rights accounts and cash accounts by X-Trade Brokers Dom Maklerski S.A." (the Regulations). This Policy characterizes only some aspects of Orders execution at X-Trade Brokers. Detailed principles of Orders executions are set out also in the Regulations.

2. Area of application

1. The Policy applies to all Orders issued by Retail Clients, which are executed outside a regulated market ("Over the Counter") involving financial Contracts for Difference ("CFD's") and Option Financial Instruments. It means that Client's Orders will be executed outside a regulated market or multilateral trading facility ("MTF's"), for which the Client hereby agrees.
2. X-Trade Brokers will act as the second party of Transactions concluded in order to execute the Client's Order. X-Trade Brokers adopted an internal procedure concerning prevention of conflicts of interests at X-Trade Brokers Dom Maklerski S.A.

3. Execution criteria

1. X-Trade Brokers as a matter of course incorporate the following relevant Orders execution criteria and factors so as to achieve the best possible result:
 - a. Price (please see the information in regard to establishing rates set forth in Chapter 8 of the Regulations);
 - b. Type of Order (for example, the variety of the Order, such as stop-Order or limit-Orders)'
 - c. Size of an Order (for example, whether the given Order exceeds the specified volume);
 - d. Costs related to the execution of an Order (if any);
2. X-Trade Brokers may incorporate other factors and criteria to the extent that they appear relevant to the execution of a certain Order if justified by Client's interest.
3. X-Trade Brokers will immediately notify the Retail Client of all circumstances, which make the Order impossible to perform.
4. For Equity CFD's transactions execution X-Trade Brokers relies on its counterparties to execute Underlying Instrument Transactions on Underlying Exchanges.
5. X-Trade Brokers makes sure that its counterparties' execution policies protect clients' best interest. These policies are reviewed on a yearly basis to ensure compliance.

4. Quotation of prices

1. X-Trade Brokers shall systematically quote on Trading Days the prices of Financial Instruments on the basis of prices of corresponding Underlying Instruments.

2. Detailed description of Trading Days of Financial Instruments available in X-Trade Brokers is set out in Table of Trading Days placed on the website www.xtb.pl.
3. Transaction prices shall be quoted in EOPS and OOPS on the basis of current prices made available on Underlying Exchanges, leading financial institutions or information agencies.
4. X-Trade Brokers shall use its best endeavours to ensure that transaction prices do not differ materially from the prices of Underlying Instruments made available in real time by the most reputable information services.

5. Grossly Erroneous Price

1. The Client accepts the fact that the prices provided by X-Trade Brokers by means of the transaction systems, may be considered as Grossly Erroneous. The conditions to recognize the price as Grossly Erroneous are described in the clauses below and in the Chapter 8 of the Regulations. In case when Grossly Erroneous price occurs, X-Trade Brokers shall have the right to evade from legal consequences of the Transaction concluded on the basis of such price, on the principles set forth in Chapter 8 of the Regulations. Prior to concluding Transactions with X-Trade Brokers, the Client should carefully acquaint himself with these principles and conditions mentioned below.
2. In the event of the CFD based on the exchange rates and precious metals, X-Trade Brokers may recognize the quotation as Grossly Erroneous, if the quotation indicated by two independent sources, differs from the quotations provided by X-Trade Brokers by at least ten times from the actual Spread. The independent source of the X-Trade Brokers prices shall be understood as a recognized broker or a recognized information agency.
3. In the event of the CFD based on the futures contracts X-Trade Brokers may recognize the quotation as non-market, if the quotation of the proper futures contract indicated by means of the information agency differs from the quotation provided by X-Trade Brokers by at least ten times from the actual Spread.
4. In the event of the CFD based on the futures contracts, X-Trade Brokers may deem the quotation as Grossly Erroneous in the following cases:
 - a. If the futures contract, being the basis of the assessment of CFD based on it, was suspended on the stock exchange and the Client concluded with X-Trade Brokers, the Transaction already after the futures contract has been suspended.
 - b. If the futures contract being the basis of the assessment of the CFD based on it, reached on the stock exchange the daily limit of the price fluctuations and the Client concluded with X-Trade Brokers the Transaction already after the futures contract reached the limit.
 - c. If the stock exchange, at which the futures contract is traded being the basis to make the assessment of the CFD based on it, cancels the Transactions concluded within the period, in which the Client's Transactions were made on the Financial Instrument or if it cancels the Transactions on the futures contract at the prices, which were the basis to assess the CFD upon concluding the Transaction by the Client.
 - d. If the price of the futures contract being the basis of the assessment of the CFD based on it is, in the opinion of the recognized information agency, the implied from the Spread Transaction or the indicative price and this price differs from the previous transaction price by the amount exceeding ten times actual Spread for the CFD based on the futures contract.
5. In the event of the CFD based on the stock exchange indices X-Trade Brokers may recognize the quotation as Grossly Erroneous in the following cases:

- a. If the average value of the price of the CFD (average of the bid and ask price) upon concluding the Transaction by the Client differs from the value of the index being the basis thereof by the value more than ten times from actual Spread for this Financial Instrument. The value of the index must be provided by the recognized information agency.
- b. If not all stocks included in the composition of the index were the subject of the trade in this moment (were suspended or, for other reasons, the trade was impossible), which resulted in reforming the real value of the index.
6. In case of the CFD based on the prices of the stocks X-Trade Brokers may deem the quotation as Grossly Erroneous in the following cases:
- a. If the average value of the price of the CFD upon concluding the Transaction by the Client differs from the value of the stock being the basis thereof by the value more than ten times from actual Spread for this Financial Instrument. The value of the stocks must be provided by the recognized information agency.
- b. If the stock, being the basis of the assessment of the CFD is suspended, or the trade with it on the parental market does not take place for other reasons upon concluding the Transaction by the Client on the CFD.
7. In the event of the CFD based on the prices of the base metals (*base metals*) X-Trade Brokers quotes the prices of the cash market implied from 3-month forward contracts. X-Trade Brokers can deem the quotation of the CFD as Grossly Erroneous:
- a. If the forward contract being the basis of the assessment of the CFD based on it was suspended on the stock exchange and the Client concluded with X-Trade Brokers the Transaction already after the forward contract has been suspended.
- b. If the stock exchange, on which the forward contract is traded being the basis of the assessment of the CFD based on it, cancels the Transactions concluded within this period, in which the Transactions of the Client were made on the Financial Instrument or if it cancels the Transactions on the forward contracts at the prices, which were the basis to assess the CFD upon concluding the Transaction by the Client.
- c. If the price of the forward contract being the basis of the assessment of the CFD based on it is, in the opinion of the recognized information agency, the implied price from the spread Transaction or the indicative price and its price differs from the previous Transaction price by the amount exceeding ten times actual Spread for the CFD based on the forward contract.
- d. In case when the quotations of the forward contract indicated by means of the recognized information agency used for the implication of the cash price of the Financial Instrument differ by at least ten times the actual Spread from the price of the forward contract used by X-Trade Brokers to implicate the cash price of the CFD.
8. If, upon concluding the Transaction by the Client on the Option Financial Instruments, the reference exchange rate of the proper Financial Instrument, for which Option Financial Instrument was given was non-market in accordance with any criteria provided in the clause 5.2-5.7, then X-Trade Brokers shall be entitled to recognize the price of such an Option Financial Instrument as Grossly Erroneous.
9. If the reference exchange rate of the Financial Instrument used to assess the Option Financial Instrument differs from the exchange rate of the Financial Instrument quoted at this time on the transaction platform, then X-Trade Brokers shall be entitled to recognize such a price of Option Financial Instrument as non-market.
10. In case of an Option Financial Instruments based on the prices of the currencies and precious metals, X-Trade Brokers may deem the quotation as Grossly Erroneous, if the price of the Option Financial Instrument differs from the price of the option (of the same time, expiration date, strike and other potential parameters) calculated on the basis of the input variables of the Black-Scholes model provided upon the moment of concluding the transaction of the Option Financial Instrument by more than 40%. The calculation is made from the Black-Scholes model on the basis of the market parameters obtained from the information service Bloomberg or the specialist transaction service of the derivative instruments Superderivatives.
11. In case of the Option Financial Instruments for the Financial Instruments based on the futures contracts X-Trade Brokers may deem the quotation as Grossly Erroneous, if the price of the Option Financial Instrument differs from the price of the option (of the same type, expiration date, strike and other potential parameters) calculated on the basis of the input variables of the Black-Scholes model provided for the moment of concluding the Transaction of the Option by more than 40%. The calculation is made from the Black-Scholes model on the basis of the market parameters of the model obtained from information service Bloomberg or a specialist transaction service of the derivative instruments Superderivatives.
12. In case of the Option Financial Instrument for the Financial Instruments based on the base metals X-Trade Brokers shall be entitled to recognize the price of the Option Financial Instrument as Grossly Erroneous, if the value of the volatility parameter used for the assessment differs by at least 25% from the value resulting from the Heston-Nandi model (with the use of the actual parameters of the model). In case of other parameters used in the Black-Scholes model to calculate the price of the Option Financial Instrument based on the base metals X-Trade Brokers shall be entitled to recognize the quotation as Grossly Erroneous in the event when any of these parameters (except for the volatility and reference rate of the Financial Instrument) differs by more than 40% from the values indicated as the market ones upon concluding the Transaction by the information agency Bloomberg.
13. In case of the Option Financial Instruments, for which the optional stock exchange market is available X-Trade Brokers shall be entitled to recognize the quotation as Grossly Erroneous, if the volatility implied from the stock exchange with the parameters closest to the Option Financial Instrument differs by more than 25% from the volatility used by X-Trade Brokers to indicate the price of the Option Financial Instrument.
14. The models of option valuation – Black Scholes and Heston Nandi, are set forth in the Appendix to the herein Policy.
- 6. Time for execution of placed disposals**
1. X-Trade Brokers performs Clients Disposals and Orders promptly after its placing by the Client, unless something different results from an Order. In standard market conditions, X-Trade Brokers within 90 seconds confirms the Disposals placed by the Client (Orders in case of Financial Instruments quoted in the "Instant Execution" mode or the price inquiry) concerning a given Financial Instrument. This condition, however, does not have any application in the situation when, on a given market, there is an exceptional volatility of prices of the Underlying Instrument or the loss of liquidity and in other cases qualified in accordance with the Regulations as Force Majeure.
2. Due to a level of complexity principles described in clause 6.1 do not apply to Option Financial Instruments. X-Trade Brokers shall use its best effort as to make the time of an Order's execution not longer than 90 seconds.
3. In the period when market is opening, as mentioned in clause 7.4, standard time of the Order's execution, as set out above does not apply.
4. X-Trade Brokers executes Client's Orders in order of their reception, unless something different results from the conditions of an Order's execution specified by the Client, character of an Order or if such order of Order's execution is opposite to the Client's interest.
5. Equity CFD's Transaction entered by the Client in most cases generates a transaction on the Underlying Instrument on one or more of the Underlying Exchanges. Equity CFD quotation shown in EOPS should be deemed as indicative and it is not guaranteed that the

Client will deal at this quotation. The current Equity CFD Price of the Transaction on an Equity CFD will be based on the transaction price of an Underlying Instrument reported back by X-Trade Brokers. The rules of establishing an Equity CFD Price are set out in chapter 8 of the Regulations.

7. Changes to the Spread

1. X-Trade Brokers applies a principle of quoting prices of Financial Instruments using a fixed Spread specified for each Financial Instrument in the Financial Instruments Specification Table.
2. a. X-Trade Brokers reserves the right to make changes in the X-Trade Brokers Spread in situations described in the Regulations. In those events Spread may be increased automatically without prior notice to the Client and without Client's consent.
b. However for Floating Spread Account (CFD) chosen by the Client, the principles referred to in points 7.2 letter a and 7.3-7.5 shall not apply. For Floating Spread Account (CFD) X-Trade Brokers applies a principle of quoting prices of CFD with the use of variable Spread so that the Spread reflects in the best way possible prevailing market conditions and volatility of Underlying Instrument prices
3. In case of occurrence of a large volatility or limited liquidity of the Underlying Instrument X-Trade Brokers may without prior notice to the Client enlarge the Spread on Financial Instruments.
4. Particularly the period when the liquidity is largely limited on the underlying market is the opening of the market on Sunday at 11:00 p.m. X-Trade Brokers commences trading in such situations with an enlarged level of spread. Spread comes back to fixed values as fast as the liquidity and the volatility of the underlying market allows. Usually this process takes not more than 10-20 minutes, however in cases of limited liquidity or large volatility the process may take longer.
5. Points 1-4 do not refer to Equity CFDs. For Equity CFDs X-Trade Brokers shows variable Spread based on a prevailing Underlying Instrument price quoted on an Underlying Exchange. Spreads are not altered or widened in any way by X-Trade Brokers and are supposed to give Clients the current state of the market for Underlying Instruments on the Underlying Exchange. Equity CFD quotation shown in EOPS should be deemed as indicative and it is not guaranteed that the Client will deal at this quotation. The current Equity CFD Price of the Transaction on an Equity CFD will be based on the transaction price of an Underlying Instrument reported back by X-Trade Brokers. Clients should be aware that their Orders for Equity CFDs may be executed at prices better or worse than indicative price shown in EOPS. For Limit Orders the Price for Equity CFD may be only better than requested by the Client or the same. The rules of establishing an Equity CFD Price are set out in Chapter 8 of the Regulations.

8. Price limit orders, stop orders

1. The Client has the possibility to place Orders with the price limit and the stop Orders. The realization of the Orders with the price limit and the stop Orders for all the Financial Instruments with the exception of Equity CFD's shall be held in the following manner:
 - a. The limit and stop Orders are realized at the price indicated by the Client with the exception from point b.
 - b. The stop and limit Orders realized upon the opening of the market are executed at the opening price for a given Financial Instrument.
 - c. The Orders of the limit and stop type can be placed only then when a given Financial Instrument is traded.
 - d. The Orders of the stop type cannot be placed if the absolute value of the difference between the price of the Order's activation and the current price of the Financial Instrument is lower than the minimum limit for the stop Orders for a given Financial Instrument. These limits are available on the X-Trade Brokers website www.xtb.pl. The limits can be raised in case of the economic data defined in the section Calendar available on the X-

Trade Brokers website www.xtb.pl or in case of the a high market volatility on a given Financial Instrument.

- e. Limits for stop and limit Orders are enlarged at the moment of opening a market on Sunday at 11:00 p.m. Limits come back to fixed values as fast as the liquidity and volatility on the underlying markets allows. Usually the process takes from 10 to 20 minutes, however in cases of limited liquidity and enlarged volatility this period may last longer.

9. Order types for Equity CFD

1. Due to its characteristic Orders for Equity CFD's may differ in some aspects from other Orders for other Financial Instruments. Prior to entering into any Equity CFD transaction the Client should become aware of how different Order types are executed for Equity CFD and how they may influence Equity CFD transaction price.
 - a. Limit Orders are realized at the price indicated by the Client or better.
 - b. In the money Limit Orders are not allowed. For Buy Orders highest possible limit is the current Ask price. For Sell Orders lowest possible limit is the current Bid price.
 - c. Stop Orders are realized at the conditions laid down by Underlying Exchanges.
 - d. Market orders are not subject to requote, which means that by using "Sell at Market" or "Buy at Market" the Client wishes to sell or buy Equity CFD at the price reflecting current market price of the stocks underlying the Equity CFD position.
 - e. If a Client wishes to execute a market order for Equity CFDs and relevant Underlying Stock is currently suspended for trading (frozen) on the Underlying Exchange, then if the market order for Underlying Instrument is not executed within 30 seconds, Client's market order for Equity CFDs is rejected by EOPS.

10. Size of Order

Client's Order may be rejected and cancelled, if it accounts for the amount exceeding the maximal value of Order specified in Financial Instrument Specification Table.

11. Place of performance

1. Due to fact that X-Trade Brokers shall serve as Client's counterparty in regard to Transactions involving Financial Instruments, X-Trade Brokers shall be the place of performance of all such Transactions.
2. For Equity CFD X-Trade Brokers shall be a place for Client's order execution. However for most Equity CFDs Transactions Client acquires Equity CFD after a corresponding Underlying Instrument Transaction has been completed on an Underlying Exchange. Therefore Equity CFD reflects a transaction in Underlying Instrument that was executed on an Underlying Exchange.

12. Technology

X-Trade Brokers shall use its best endeavours to provide the highest quality of technology, thus shall employ means which are aimed at ensuring the best execution of Client's Order.

13. Review, audit and monitoring of these principles

1. X-Trade Brokers shall review the Orders Execution Policy (OTC) at least once annually and monitor regularly so as to determine whether the Orders are properly executed and in accordance with the Policy.
2. The current version of Orders Execution Policy is available on the website www.xtb.pl, and X-Trade Brokers shall notify the Client per e-mail or by internal post EOPS of any material changes to the adopted measures.
3. In order to provide and sustain high level of service for Equity CFD, X-Trade Brokers review the order execution policies of its intermediaries on a yearly basis.

Appendix

1. Vanilla options prices are determined from the following formula:

$$(1) \quad C = e^{-rT} (FN(d_1) - KN(d_2))$$

$$(2) \quad P = e^{-rT} (KN(-d_1) - FN(-d_2))$$

where:

$$(3) \quad d_1 = \frac{\ln\left(\frac{F}{K}\right) + \frac{\sigma(K,T)^2 T}{2}}{\sigma(K,T)\sqrt{T}}$$

$$(4) \quad d_2 = d_1 - \sigma(K, T)\sqrt{T}$$

C - call option value

P - put option value

r - interpolated for term T interest rate of the currency in which the given instrument is denominated

T - time to expiry

K - option strike price

F - forward price of underlying instrument for term T

$\sigma(K, T)$ - volatility of the underlying instrument price for given vanilla option

The value of volatility is determined for K and T from two-dimensional interpolation (extrapolation) of implied market volatilities received from stock exchange option prices based on these instruments.

When it is not possible to obtain the parameter of volatility $\sigma(K, T)$ from the market quotations then option shall be valued on the basis of Heston-Nandi model (2000).

2. The Manner of calculation of market volatility on the basis of Heston-Nandi model (2000)

It shall be designated by $S_1, S_2, S_3, \dots, S_t$. S_t continuity of historic close prices of given financial instrument.

Let: $S_1, S_2, S_3, \dots, S_t$. S_t sequence of historic close prices of given financial instrument.

We define logarithmic phrase: $r_t = \ln\left(\frac{S_t}{S_{t-1}}\right)$,

and we assume that subsequent values r_t are sample generated from the following model:

$$r_{t+1} = r(t) - \frac{1}{2} \cdot \sigma_{t+1}^2 + \sigma_{t+1} \cdot z_{t+1}$$

$$\sigma_{t+1}^2 = \omega + \beta \cdot \sigma_t^2 + \alpha \cdot (z_t - \gamma \cdot \sigma_t)^2$$

$r(t)$ - interest rate for deposits within term t, t+1.

σ_t^2 - conditional variance

z_t - random variable of the standard normal distribution $N(0,1)$

$\omega, \beta, \alpha, \gamma$ - obtained by the maximum likelihood method estimates for the parameters

The formula for call option price at the moment t, shall be as follows:

$$C = \frac{F e^{-rT}}{2} + \frac{e^{-rT}}{\pi} \cdot \int_0^{\infty} \operatorname{Re} \left[\frac{K^{-i\phi} f^*(i\phi + 1)}{i\phi} \right] d\phi - \frac{K e^{-rT}}{2} - \frac{K e^{-rT}}{\pi} \cdot \int_0^{\infty} \operatorname{Re} \left[\frac{K^{-i\phi} f^*(i\phi)}{i\phi} \right] d\phi$$

where:

T - time to expiry

$$f^*(\phi) = S_t^\phi e^{A_t + B_t \sigma_{t+1}^2}$$

whereas A_t i B_t are calculated using recursive metod „backwards“:

$$A_t = A_{t+1} + \phi r + B_{t+1} \omega - \frac{1}{2} \ln(1 - 2\alpha B_{t+1})$$

$$B_t = \beta B_{t+1} + \phi \left(-\frac{1}{2} + \gamma \right) - \frac{1}{2} \gamma^2 + \frac{1}{(1 - 2\alpha B_{t+1})} (\phi - \gamma)^2$$

while, we assume that $A_{t+T} = B_{t+T} = 0$.

Put options prices are calculated from the call-put parity:

$$P = C - (F - K) e^{-rT}$$

3. Calculation of European Digital option price

- a) Digital Range option value for the triggers K_1 i K_2 we calculate using the following formula:

$$DR(K_1, K_2) = e^{-rT} \cdot N \cdot \int_{K_1}^{K_2} f(F, K, T) dK$$

- b) Digital Above option value for the trigger K_1 we calculate using the following formula:

$$DA(K_1) = e^{-rT} \cdot N \cdot \int_{K_1}^{\infty} f(F, K, T) dK$$

- c) Digital Below option value for the trigger K_1 we calculate using the following formula:

$$DB(K_1) = e^{-rT} \cdot N \cdot \int_{-\infty}^{K_1} f(F, K, T) dK$$

where:

C, P, T, K, H, $\sigma(K, T)$ - as in example 1, 2 i 3 depending on the type of the instrument.

f - density of distribution probability of the underlying instrument price

at the option expiration date. $f(F, K, T) = \frac{\partial^2 C(F, K, T)}{\partial K^2} =$

$$\frac{\exp\left(-\frac{1}{2} \left(\frac{\ln\left(\frac{F}{K}\right)}{\sigma(K, T)\sqrt{T}} - \frac{1}{2} \sigma(K, T)\sqrt{T} \right)^2\right)}{4 \cdot K \cdot \sqrt{2\pi T} \cdot \sigma(K, T)^3}$$

$$\left(-K^2 T^2 \sigma(K, T)^4 \left(\frac{\partial \sigma(K, T)}{\partial K} \right)^2 + 4 \left(\sigma(K, T) + K \cdot \ln \frac{F}{K} \frac{\partial \sigma(K, T)}{\partial K} \right)^2 + 4KT \sigma(K, T)^3 \left(\frac{\partial \sigma(K, T)}{\partial K} + K \frac{\partial^2 \sigma(K, T)}{\partial K^2} \right) \right)$$

SIGNATURES PAGE FOR AGREEMENT NO:.....

NAME AND SURNAME:..... DATE:.....

I ACKNOWLEDGE AND AGREE THE ABOVE **CUSTOMER AGREEMENT (pages 5 and 6)****Client's Signature 3**.....I ACKNOWLEDGE AND ACCEPT THE ABOVE **DECLARATION OF INVESTMENT RISK (pages 7 and 8)****Client's Signature 4**.....I ACKNOWLEDGE AND ACCEPT THE ABOVE **ORDER EXECUTION POLICY (pages 9, 10, 11, 12)****Client's Signature 5**.....

I state under pain of criminal liability for providing false data, that I am not an I was not a: a) head of state; b) head of government; c) minister, deputy minister or assistant minister; d) member of parliament; e) member of supreme Court, of constitutional court or of other high-level judicial bodies whose decisions are not subject to further appeal; f) member of court of auditors; g) member of the board of central bank; h) ambassador; i) charges d'affairs; j) high ranking officer in the armed forces; k) member of the administrative, management or supervisory bodies of State-owned enterprises; l) spouse of a person referred to in letter a-k; m) parent or a child of any of the persons referred to in letter a-k; n) person who remains or remained with person referred to in letter a-k, in factual close business, professional, family or personal relationship.

Client's Signature 6.....